

THE AUDIT PROCESS

Performance Audits - Audit Reporting

APPROVAL/TRANSMITTAL

This directive sets forth the policies and procedures for reporting the results of audits to USDA managers and other interested officials. This supersedes IG-7316, dated April 1991. Remove and destroy previous editions.

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Inspector General

TABLE OF CONTENTS

	<u>Page</u>
A. BACKGROUND	
1. Applicability	1
2. Types of Reports	1
B. POLICY AND PROCEDURES	2
C. PROCESSING DRAFT REPORTS	3
1. Designation as Draft	3
2. Transmittal of Discussion Draft	3
3. Transmittal of Official Draft	4
4. Signatory Procedures	4
D. MANAGEMENT ALERT	5
E. REPORT FORMAT	6
1. Transmittal Memo	6
2. Organization and Structure	7
3. Executive Summary	8
4. Table of Contents	9
5. Introduction	10
6. Findings and Recommendations	13
7. Reporting Recoveries	19
8. General Comments	19
9. Exhibits	20
10. Distribution Page	20
F. MEMORANDUM REPORT FORMAT	20
G. NO ADVERSE CONDITIONS	21
H. INPUT TO FINANCIAL STATEMENT AUDITS	21
I. NON-USDA AUDITS	21
1. Single Audits	21
2. Contracted Audits	21

EXHIBITS

- A. Example of Management Alert Form
- B. Message Design Form For Reports
- C. Example of Discussion Draft Transmittal Memo
- D. Example of Official Draft Transmittal Memo
- E. Example of Final Report Transmittal Memo
- F. Illustration of Finding Presentation
- G. Reporting Requirements for Audits Using Statistical Sampling
- H. Example of Monetary Results Report Exhibit

A. BACKGROUND

1. Applicability

This manual section sets forth the reporting requirements for performance audits, which encompass economy and efficiency as well as program audits, financial-related audits (in that they generally parallel performance audits), "management letters" evolving from financial statement audits, and evaluations. Due to their unique nature, audits of financial statements are addressed in a separate manual section (see IG-7315).

2. Types of Reports

a. Management Alert - Issued during an audit to notify the agency of conditions requiring prompt attention prior to completion of the review. Management alerts are interim reports; all reporting requirements do not have to be met at the time of issuance. The results of all management alerts must eventually be reported in a formal audit report. See exhibit A for an example of the form to be used. Although the form calls only for "issues" and "recommendations," the information conveyed should be sufficient to understand what we did, what we found, and the potential impact of the problems noted.

b. Draft Report - The preliminary writeup of the results of an audit which provides the medium whereby OIG exercises quality control over the written product, communicates audit results, and obtains the agency's views prior to issuance of the final report. The draft reporting process generally consists of the following phases.

(1) Working Draft - The initial draft prepared by the auditor and submitted to audit management for review.

(2) Discussion Draft - The referenced draft transmitted to the agency for formal discussion.

(3) Official Draft - The final draft transmitted to the agency subsequent to the exit conference, reflecting revisions made, if any, with a request for written comments.

c. Audit Report - The final released document, including the agency's written response. Audit reports can be prepared in a standardized, formal format or as a memorandum. The memorandum format should be used sparingly and must be very brief.

B. POLICY AND PROCEDURES

In communicating audit results to management officials and other interested parties, OIG personnel shall follow the procedures in this directive, which incorporate and supplement Generally Accepted Government Auditing Standards (GAGAS) and the Quality Standards for Inspections. Any deviations must be approved by the AIG/A.

1. Message Agreement Conference with Stakeholders. Composing a report which is readily understood, succinctly conveys the audit results and the auditor's conclusions, makes a persuasive case that program changes are needed, and is completed in a timely manner is a formidable task. Although the foundation of an audit report is the body of evidence compiled during the audit which supports the findings, considerable judgment must be exercised in terms of, for example, how best to get the message across, what constitutes significance, and what direction the recommendations should take.

The formulation of these judgments can be facilitated by convening all interested and knowledgeable audit staff at the outset of the report writing process. The potential findings and recommendations that can be derived from the audit process should first be compiled by the audit team, and then the audit's "stakeholders" brought together in a message agreement conference. The stakeholders, for audits to be signed by the AIG/A or the IG, include Regional management, the audit staff, and the Headquarters' Division(s). The conference will serve as a platform for the audit team to sell and convince the stakeholders on the need to report the issues identified. At the completion of the conference, the stakeholders will mutually establish how the report should be developed. GAO developed a "Message Design Form" to foster this effort (an example tailored to USDA operations appears in exhibit B). The form should be used for all audits and be very brief; it should be only as extensive as needed to convey the issues.

2. Release of Reports Containing Sensitive Information. OIG audit reports are subject to release to the general public under the Freedom of Information Act (FOIA). Reports may describe, however, conditions which contain sensitive information, have not yet been corrected, and potentially could facilitate improper acts. These issues, most likely to deal with computer security, need to be identified prior to release. FOIA requests for these reports can be denied until corrective action has been implemented to preclude the foreseeable harm. These conditions must be rectified by management as promptly as possible to permit release of the report. Under no circumstances should reports include details of systems or operational weaknesses that could provide a "road map" on how to, for example, circumvent computer security.

3. Exit Conference. The agency shall be given the opportunity to discuss the results of all audits in an exit conference. If release of the report under FOIA should be delayed due to sensitive disclosures, the specific timeframe to be allotted to correct the underlying conditions

(B3)

needs to be negotiated. This period must be reasonable but kept to an absolute minimum. If the issues presented are not major, the exit conference can be conducted by telephone. When no material revisions are required as a result of the discussion, or the discussion is waived by the agency, the discussion draft can be designated as the official draft. The agency shall be notified of this designation in writing with a request for written comments.

4. Audit Termination. A memorandum shall be conveyed to management if an audit is terminated prior to completion to briefly summarize the work performed and explain the reasons for terminating the audit.

C. PROCESSING DRAFT REPORTS

1. Designation as Draft. Draft reports shall be appropriately marked on each page, i.e., discussion or official draft. All draft reports will have the watermark "Draft" superimposed upon all pages. The cover page of the discussion and official drafts shall contain the following statement:

NOTICE - THIS DRAFT RESTRICTED TO OFFICIAL USE

THIS IS A DRAFT REPORT PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE - OFFICE OF INSPECTOR GENERAL AND IS SUBJECT TO FURTHER REVISIONS BEFORE IT IS RELEASED IN ITS FINAL FORM. THIS DRAFT IS PROVIDED TO PROGRAM OFFICIALS SOLELY FOR THEIR REVIEW AND COMMENTS ON THE SUBJECTS REPORTED. RECIPIENTS OF THIS DRAFT ARE NOT AUTHORIZED TO MAKE ANY FURTHER DISTRIBUTION OR RELEASE OF THIS INFORMATION EXCEPT FOR OFFICIAL REVIEW AND COMMENTS.

2. Transmittal of Discussion Draft. The discussion draft shall be transmitted to the agency prior to the exit conference not more than 45 days after the completion of fieldwork. (Note: All references are to calendar days unless otherwise specified.) Fieldwork is considered complete when the audit program is signed by the team leader, denoting that all procedures have been performed. The transmittal will note that an exit conference will soon be requested. When the audit involves a non-Federal entity, the discussion draft should be transmitted to and discussed with the Federal funding entity by OIG prior to OIG's transmittal to and discussion with the non-Federal agency. Arrangements for transmittal of the report and discussion with the non-Federal entity should be made at the exit conference with the Federal entity. If the report contains data that may result in the delay of the release of the report under FOIA, the transmittal letter should include verbiage similar to the following (the exact wording should be tailored to

IG-7316

the situation):

(C2)

The attached discussion draft is provided for your review. The final report is subject to release to the public in accordance with the Freedom of Information Act (FOIA). Because of the serious internal control weaknesses disclosed in the report, we are concerned that distribution of the report may foster system intrusions. Therefore, please review the report and identify any issues which you believe could facilitate an unauthorized access, thereby causing an adverse impact on the Department if this report were released prior to completion of corrective action. We will discuss these systems security concerns at the exit conference. At that time, we will determine if release of the final report in response to any FOIA request(s) should be denied in order to allow adequate time for corrective action, and decide when the report could be made available to the public.

See exhibit C for an example of the transmittal letter.

3. Transmittal of Official Draft. The official draft report shall be transmitted to the agency within 15 days of the exit conference requesting a written response be sent directly to the issuing region. The reply will be requested to be sent within 30 days of the date of the transmittal letter and specify concurrence with the report's findings, recommendations, and monetary results in exhibit A of the report. Any additional information that the agency believes OIG should consider before finalizing the report should also be solicited.

The 30-day response period can be reduced when, for example (a) the issues are not disputed and the corrective action plan required is not complex; (b) critical policy issues need to be addressed more promptly; and/or (c) other circumstances necessitate a more timely reply. Extensions may be approved by OIG. When the audit involves a non-Federal entity, the official draft should be transmitted to the Federal funding agency by OIG requesting a written response.

The transmittal shall inform the agency that its response, along with OIG's position regarding the reply, will be included in the audit report. If the reply is not received within the requested timeframe, immediate followup should be initiated. If the response is still not forthcoming, the report can be released without it. See exhibit D for example of transmittals.

4. Signatory Procedures. The AIG/A or the IG will sign all headquarters level, and any others designated, official draft and final reports. The applicable DD will sign the discussion drafts. All other reports will be signed by the RIG's.

D. MANAGEMENT ALERT

1. A management alert is an interim notification of burgeoning problems that need to be rectified immediately. Conditions should be stated briefly (1-2 pages) but in sufficient detail to support the contention that prompt action is warranted. Findings and recommendations in management alerts are to be subsequently included in an audit report. Due professional care must be exercised in the release of a management alert because GAGAS may not have been fully met (in that the audit is still ongoing) at the time of issuance. Further, a key component of OIG's quality control system, referencing, would not yet have been performed. As a result, there are risks associated with these issuances in that the facts may be misstated, conclusions flawed, and recommendations misdirected. Audit management needs to carefully weigh these risks against the need to surface critical issues that warrant the agency's immediate action.

2. Management alerts issued at the headquarters level shall be addressed to the Agency Administrator, or to a higher level, if appropriate, through the Agency Liaison Officer and shall be promptly issued in draft form (unsigned) through the DD, after the AIG/A has been briefed. Management alerts, addressed to the Administrator level or above, should be hand-carried and discussed within 7 days of receipt in headquarters.

3. Management alerts shall be transmitted to the auditee in final form within 3 days of the discussion with the agency.

4. The DD shall ensure that the appropriate Assistant or Under Secretary is provided a copy of management alerts issued to the Agency Administrators.

5. Recommendations shall be made for conditions requiring corrective action. A written response to the recommendations shall be requested within 10 days (5 days if the condition noted is particularly severe).

6. Replies that express nonconcurrency or propose inadequate corrective action plans shall be promptly evaluated and rebutted, as appropriate, in writing. Resolution meetings shall be held and the matter elevated, when necessary, in an expeditious manner.

7. Management alerts are not to be disseminated beyond the framework of the agency's organization. Management alerts are interim-reporting vehicles only and potentially subject to substantial change.

8. The appropriate DD should be provided copies of all regionally issued management

alerts. All significant or sensitive issues should be discussed with the DD prior to release.

(D)

9. Each management alert shall contain the audit number bearing a parenthetical suffix indicating whether it is the first, second, etc., notification stemming from that audit, for example: 04099-1-At(1), 04099-1-At(2). Management alerts are to be coded into CAPTAIN.

E. REPORT FORMAT

OIG uses a standardized report format to convey results. Changes to the format may be appropriate in unique circumstances, but must be approved by the AIG/A. All audit reports shall have blue covers and evaluation reports shall have beige covers with the job title expressed in terms that explain the subject of the report. The cover page shall also contain the report number, month and year of issuance, and name of the issuing region or division.

Each section of the report, as described below, shall start on a new page. See IG-7217, General Requirements - Administrative Handling, Transmittal and Distribution of Audit Reports, for instructions on the administrative handling of the audit process.

1. Transmittal Memo. Each report shall contain a transmittal memo behind the cover page, which authenticates the report (see exhibit E). The audit report shall be transmitted (issued) to the agency not more than 30 days after receipt of the agency's response. The transmittal memo should include:

a. If the report contains information which fulfills the criteria to deny a FOIA request, the following should be included:

We have mutually concluded that release of this report prior to the implementation of corrective action may have an adverse effect on the Department. We have also agreed that the recommended corrective action will be taken within ____ days of the date of the report. The report will be made available to the public after that time in accordance with the Freedom of Information Act.

b. A reference to the exhibit containing the agency's written reply to the official draft and a statement that the agency's response and the OIG position are set forth in the findings and recommendations section of the report. If the agency did not respond to the official draft, the absence of a reply will be cited.

c. The status of management decisions that were achieved based upon the response

to the official draft, to include concurrence with the monetary results on exhibit A of the report,

(E1c)

should be provided. Each recommendation (by number) where management decision has been reached (i.e., OIG has accepted the agency's corrective action plan and the agency agreed with the monetary results) should be noted as well as the recommendations (by number) where management decision has not been reached. (This can be handled on an exception basis, if appropriate; i.e., if management decision on only a minority of the recommendations was achieved.) If the reply to the official draft did not result in management decision, a request for a reexamination of the monetary results on exhibit A, if applicable, and a sufficiently detailed time-phased corrective action plan to the audit report's recommendations in accordance with Departmental Regulation 1720-1, Audit Followup, Management Decisions, and Final Action, should be made. If the criteria for final action were met for any recommendation, it should be so noted.

d. If a response is required (i.e., management decision has not been achieved), it should be requested 60 days from the date of the letter; the timeframe can be shortened if circumstances so dictate. The following statement should be made.

In accordance with Departmental Regulation 1720-1, please furnish a reply within 60 days describing the corrective action taken or planned and the timeframes for implementation for those recommendations for which a management decision has not yet been reached. Please note that the regulation requires a management decision to be reached on all recommendations within a maximum of 6 months from report issuance. Follow your internal agency procedures in forwarding final action correspondence to the Office of the Chief Financial Officer.

Note: The last sentence is needed only if management decision has been reached on one or more recommendations.

2. Organization and Structure. Related findings should be grouped and presented in chapters to promote cohesiveness, readability, and understanding. This requirement is critical; segmentation should be given paramount consideration. Each chapter of aggregated findings should normally answer the questions posed by an audit objective. Chapters should be given descriptive titles which provide the reader with an overview of what was found. The chapter should be prefaced by a brief synopsis of the findings that follow. The synopsis should be composed in the condition/cause/effect sequence and contain the overall conclusions. The synopsis should contain unifying statements to provide further understanding of how the findings are linked or related (e.g., a common cause, a common effect, et. al.).

(E2)

Generally, each finding will have its own condition, cause, and effect; however, information presented in the synopsis would not be repeated in the findings. If, for example, the findings have a common cause, that cause would be stated in the synopsis and would not appear again in the findings (although sufficient information would be provided in the findings to adequately develop and support that cause). Conversely, if there is no common cause, the separate causes of the findings should not be reported in the synopsis in that no unifying statement could be identified.

Findings should contain a heading which describes the problem being reported. Findings should be numerically sequenced throughout the report without regard to the specific chapter they appear in, as follows:

<u>Chapter 1</u>	<u>Chapter 2</u>	<u>Chapter 3</u>
<u>Synopsis</u>	<u>Synopsis</u>	
Finding No. 1	Finding No. 4	Finding No. 6
Finding No. 2	Finding No. 5	
Finding No. 3		

If a chapter has only one finding, it should be nonetheless numbered. If there is only one finding supporting a chapter, the finding should not be titled (in that the title of the chapter would be sufficient). Further, no synopsis would be needed because it would be redundant with the presentation of the sole finding.

In addition, subparagraph captions should be used throughout the text to reflect the introduction of new ideas or concepts to attract the attention of the reader and enhance the report's presentation.

See exhibit F for examples.

3. Executive Summary. The executive summary should follow the transmittal memo and bear Roman numeral page numbers. The executive summary should persuasively and concisely make a standalone case that corrective action is warranted. It should generally run about two to three pages in length and should not exceed four pages. The executive summary should include the following.

- a. Results in Brief. Briefly provide an overview of the major objectives, the most

(E3)

significant results, and the primary conclusions of the audit. Generally, the results conveyed in this subsection should answer the objectives (positive or negative). The findings should be stated in terms that place them in perspective and provide balance, while emphasizing the materiality of the issues raised. Corrective action taken during the audit on major adverse conditions should be noted. Issues that warrant inclusion in the agency's FMFIA report should also be highlighted.

b. Key Recommendations. Briefly summarize those recommendations that relate to the major findings described in the Results in Brief subsection. A broad overview of what OIG believes the agency should accomplish, in lieu of a listing, should be conveyed in this subsection.

c. Agency Response. The agency position on the key recommendations should be briefly stated. (Note: This section should be left blank in the draft reports. The agency position conveyed orally at the exit conference, for example, should not be included.)

d. OIG Position. If there is disagreement, OIG's rebuttal should be included. If OIG agrees with the agency response, it should be so noted and whether management decision has been achieved.

4. Table of Contents. The table of contents should follow the executive summary. Individual findings and recommendations (or the first, if there is a series) should be given their own page numbers to facilitate access. The elements of this section should be delineated as follows:

EXECUTIVE SUMMARY	i
RESULTS IN BRIEF	i
KEY RECOMMENDATIONS	ii
AGENCY RESPONSE.....	iii
OIG POSITION.....	iv
TABLE OF CONTENTS.....	1
INTRODUCTION.....	2
BACKGROUND	2
OBJECTIVES	3
SCOPE	4
METHODOLOGY	5

(E4)

FINDINGS AND RECOMMENDATIONS

CHAPTER 1 (TITLE OF CHAPTER) 6

FINDING NO. 1 6

RECOMMENDATIONS (NOS. 1 - 3)..... 9

CHAPTER 2 (et. al)..... 10

FINDING NO. 2 (et. al)..... 10

GENERAL COMMENTS 25

EXHIBITS 26

ABBREVIATIONS (if applicable) 27

GLOSSARY OF TERMS (if applicable) 28

5. Introduction. This section includes the following subsections.

a. Background. This subsection provides information needed to make the audit results understandable to persons who are not familiar with the audited area. The background should briefly describe the nature and purpose of the activity reviewed, the size and scope of the entity's responsibilities and operations, key legislative requirements, and organizational data.

Any significant constraints and unusual circumstances or events that affected the audited operations should also be explained, along with other information needed to allow an uninformed reader to put the audit results into proper perspective.

b. Objectives. The objectives subsection should clearly depict what was assessed and what was to be determined in the conduct of the audit. Objectives should be as specific as practicable to present the audit in a clearly focused, defined, and segmented manner. Objectives should not be "templated"; broad objectives may inadvertently trigger followup and compliance test requirements, as well as mute the audit's results. All of the audit's objectives should be accounted for in the report. Adverse conditions should be reported in the findings and recommendations section and positive determinations should be described in the general comments section (if not previously addressed adequately in the executive summary).

c. Scope. The scope subsection shall describe the activity audited, period of audit coverage, and when and where the audit was performed in order to accomplish the audit's objectives. The period the audit was performed is defined as the span of time from the date the audit was initiated to the date the fieldwork was completed. Significant delays encountered during the conduct of the audit should be explained. The scope shall include "profile" data--the

(E5c)

relationship between the program universe and what was audited. This subsection should place the audit coverage in perspective with the national program activity and the total program activity at the sites audited. For example, it should be explained that if an audit was performed at one regional office, that site constituted, for example, 20 percent of the national activity, and we examined 40 percent of the program activity at that site.

The scope of systems testing performed, or data reliability tests in lieu of, which established the extent of reliability of computer-based data critical to the audit's objectives should be described. When the audit objectives include an evaluation of management controls, the scope should describe the significant controls that were assessed as part of the audit and the extent of that assessment.

A statement shall be included that the audit was conducted in accordance with GAGAS, or the PCIE Quality Standards for Inspections, as applicable. If not all standards were adhered to, disclosure is required of what was not met, to include the reasons and the impact not following those standards had upon the audit results.

Extreme care must be taken to avoid implying coverage not extended. Scope limitations must be disclosed. The term "limited testing" should not be used unless the level of testing was reduced due to a disclosed scope limitation. The extent of testing is otherwise constrained only by the level of evidence that must be compiled to ensure the requirement of sufficiency has been met.

How the items to be tested were selected; i.e., via statistical sampling or judgmental selection, should be described. See exhibit G for statistical sampling reporting requirements. If judgmental selection criteria are used, information should be provided as to how the specific locations, or other selection units, and specific transactions were chosen. Biases present in judgmental selection methodologies (i.e., known or suspected problems) should be disclosed.

Any problems encountered with the quality of the evidence audited should be described, especially if there is reliance on unverified data. If data reliability was not established but the data was nonetheless used, a qualification to the conformity statement is required.

- d. Methodology. The methodology subsection generally relates to the techniques

(how the audit was conducted) used to gather evidence and the types of evidence relied upon

(E5d)

(documentary, testimonial, physical, and/or analytical). The following explains and differentiates between the scope and methodology subsections.

Scope

Methodology

Answers the questions:

Answers the question:

- When (was the audit conducted?)
 - Provide the time period of the auditee's operations that was subjected to audit examination.
 - Provide the time frame the audit was conducted
- Where (was the audit conducted)?
 - Provide a listing and description of the physical locations where the audit was conducted.
- What (was audited)?
 - Provide a description of how the records were selected (judgmentally or via statistical sampling) for review, how many were selected, and what relationship those records had with the audit universe ("profile" data). For example, "we selected 15 loans made in FY 19XX at the district office judgementally based upon dollar value. In FY 19XX, the district office made a total of 200 loans, a segment of the 1,000 loans made nationally by the agency."

- How (was the audit conducted?)
 - Provide a description of what audit tests were performed and what evidence was gathered and why. For example, "we analyzed loan documents to determine if program requirements (identify) were met."

(E6)

6. Findings and Recommendations. This section shall detail the audit findings and recommendations. Findings are conditions that warrant correction or improvement. Recommendations represent OIG's suggestions on how the adverse conditions should be rectified. Findings should be brief, encompassing only those examples and other data needed to illustrate the specific conditions, support the audit conclusions, and demonstrate that corrective action is warranted. Additional detailed examples (e.g., specific transactions) and other data may be presented in exhibits, as necessary.

a. Findings should be prefaced with a brief statement providing the overall condition, cause, criteria, and effect (unless stated in the chapter synopsis).

b. Findings shall be developed in the following manner.

(1) Describe the audited activity - Set forth the process (to include program criteria) prescribed (documented) by management. When management has not established criteria and the auditor developed it to support the findings, sufficient explanation should be provided showing the basis for the criteria, with emphasis on references from authoritative sources, to show why the criteria are reasonable, logical, feasible, and appropriate. Regulatory citations of criteria may be paraphrased if lengthy or complex with the specific citation shown in a footnote.

(2) What we did - The scope and methodology used to assess the specific activity should be described.

(3) What we found - The facts with respect to the conditions, situations, and transactions noted and the audit conclusion of inadequacy. Generally, reportable conditions stem from weaknesses in prescribed requirements or lack of compliance with requirements that are otherwise adequate as prescribed. Each finding must be significant (i.e., includes enough impact to warrant corrective action) and shall contain sufficient, competent, and relevant evidence to support the conclusion reached. The conclusion must be fully depicted and not left to inference. Findings should be as brief as practicable without sacrificing completeness. Where applicable, the audit sample or selection and the related universe (nationally and onsite) of the audited program, operations, or activity shall be shown in order to place the finding in proper perspective.

(4) Identify the cause - Causes should be analyzed to provide true insight into

IG-7316

why conditions occurred. For example, we are commonly informed at the operating level that the reason for noncompliance was lack of awareness of a requirement. The reasonableness of assertions of this type should be evaluated to determine if the problem is potentially national in

(E6b)

scope, i.e., management did not issue clear instructions to the operating level, or somehow unique to that office. If the requirement had been conveyed by management, the question may then arise as to potential control deficiencies associated with an office functioning, for example, without sufficient training on what needs to be done. Explanations of this type should not, however, be accepted at face value and reported as such.

(5) Highlight the effect, or impact, of the condition - Whenever practicable, dollar amounts or other quantifiable data shall be used to illustrate the materiality and significance of the condition. Caution must be exercised to ensure findings are fair and not misleading, and thus kept in balanced perspective. The results of the review should not be projected over, nor inferred to be representative of, the universe of the activity unless the tested items were statistically sampled. The use of nonstatistical mathematical extrapolations is prohibited.

Where statistical sampling was used to develop the impact of the audit finding, include the statistical projection in the finding. It is generally not necessary to report the results of the sample itself in addition to the projection. Statistical projections must include a statement of the sampling precision. Most of the supporting detail, i.e., the sample design, will be set forth in a supporting exhibit. If a recovery is recommended, the following is needed: a sampling precision of 25 percent or less; a sample size of at least 30; and a 95 percent lower confidence level (to be used as the recovery amount). If the projected amount is expressed for impact, the midpoint is to be used for the estimate and the lower bound (one-sided or two-sided), must be a non-negative.

(6) Identify significant weaknesses in management controls - When a material, agency-wide, internal control weakness is disclosed, a statement will be made in the finding that the agency's upcoming FMFIA report (Section 2) should include the weakness. Ensure these determinations are coded into CAPTAIN. Further, it should be noted whether the agency reported the weakness in prior years, if applicable. If so, the audit report should cite (a) the FMFIA reporting year in which the weakness was disclosed, and (b) why the condition continues to exist (planned corrective action not undertaken, corrective action underway, or completed but not adequate, e.g., did not address causal factors or the weakness cited).

The American Institute of Certified Public Accountants' concept of a material weakness, paraphrased for performance audits for the purposes of this manual section, follows.

A material weakness is a condition in which the design or operation of one or more

IG-7316

specific internal control structure elements does not reduce to a relatively low risk the possibility that errors or irregularities in amounts that would be material in relation to

(E6b(6))

the program, function, or activity audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions.

Consider two factors when determining whether a weakness is material:

(1) The nature of the control deficiency; and (2) the monetary significance of the area audited (there are exceptions, such as issues that affect health and safety). Material weaknesses include where (1) internal controls were not prescribed; (2) controls were prescribed but were inadequate; or (3) controls were adequate as prescribed but the extent of noncompliance established in a statistically sampled audit could be projected systemwide.

Control deficiencies should be linked, as specifically as possible, to the Standards for Internal Controls in the Federal Government (an attachment to IG-7313).

(7) Identify significant financial management nonconformances in financial related audits - When a material nonconformance that warrants inclusion in the agency's FMFIA report (Section 4) is identified, a statement should be made that the nonconformance should be included in the upcoming FMFIA report. Ensure these determinations are coded into CAPTAIN. Further, it should be noted as to whether the agency reported the nonconformance, in prior years, if applicable. If so, the audit report should cite (a) the FMFIA reporting year in which the nonconformance was disclosed; and, (b) why the condition continues to exist (planned corrective action not undertaken, corrective action underway or completed but not adequate (e.g., did not address causal factors or the nonconformance cited)).

(8) Identify significant instances of noncompliance with laws and regulations - Specifics regarding potential abuse or illegal acts referred to or accepted for investigation should be coordinated with Investigations before they are reported. If the determination is made not to provide the specifics, a general reference to the fact that an investigation is planned or ongoing should be disclosed, if appropriate, after obtaining clearance from Investigations or other responsible legal authority. If this disclosure does not apply to a specific finding, the matter can be described in the general comments section of the report or in the executive summary, if significant enough. Further, care must be taken not to even imply that OIG has made a determination of illegality in that that responsibility is vested solely with entities so empowered (e.g., DOJ, CG, OGC). In some cases it may be more appropriate not to issue an audit report (if full disclosure of the issues or a recommendation cannot be made).

(9) Encourage favorable reaction to findings and recommendations - Although

IG-7316

findings should be prepared in forthright terms, it should be kept in mind that the objective is to obtain favorable reaction and that this can best be done by avoiding language that generates

(E6b)

defensiveness or opposition. Although criticism of past performance is often necessary, the report should emphasize needed improvement rather than prior deficiencies.

(10) Omit references that directly identify individual persons - Personal identifiers such as names, addresses, telephone numbers, dates of birth, social security numbers, and farm and insurance policy numbers should be omitted. The agency reply should also be redacted if it includes Privacy Act information, to include auditors' names. The names of companies, private organizations, et al., may be included in audit findings if needed to clearly and completely state conditions reported. Where the inclusion of names is not essential and can be omitted, terminology such as company A, company B, etc., should be used for the report. When code names are used, a key should be provided separately to the agency.

(11) Provide attribution - If testimonial evidence is used to support a finding, attribution should be included (identifying from whom--not the individual's name but the title of the position--we received the information).

(12) Acknowledge auditee disclosures - If it is clearly evident that the auditee was already aware of a deficiency and planned to take action, or if a deficiency was brought to the attention of the auditor by the auditee, it should be acknowledged in the report.

(13) Report corrective action taken during (and as the result of) the audit - If an acceptable time-phased corrective action plan (or evidence of final action) was provided during the course of the audit, a recommendation should still be made and the management decision accepted upon release. In some instances, the corrective action may be incomplete, or deal only with the specific deficiencies cited in the finding, and not be sufficient to fully respond to the recommendation. Recognition shall be given for the action taken; however, the finding must make it clear what is needed in addition and an appropriate recommendation should be made.

(14) Previously reported conditions - Conditions reported in a prior audit should be disclosed and a description as to why the final action taken was inadequate to correct the deficiencies should be included.

(15) Explain technical terms - A glossary of terms should be included when numerous technical terms are used repetitively throughout the report. At a minimum, all terms and terminology used not found in the common vernacular should be explained.

(16) Define abbreviations, initials, or acronyms of organizations, programs, etc.
- Full names should be written out the first time they appear in the report, with the abbreviation or

(E6b)

initials shown parenthetically if usage is repetitive. An explanatory listing should be provided where extensive use of abbreviations is made throughout the report.

(17) Utilize visual aids - Use of charts, graphs, exhibits, and other visuals, like photographs and maps shall be used wherever practicable in place of voluminous or complex narratives to better illustrate the condition noted.

(18) Ensure the basis for monetary results in the report is described - Fully explain, for example, how the monetary results were computed (if applicable) and refer to exhibit A of the report. CAPTAIN provides the various definitions to be used, the criteria, and any limitations on reporting.

c. Recommendations shall immediately follow the narrative of the finding and be set off in subsections. Recommendations should be numbered sequentially. Recommendations should be followed by a summary of the agency's response and by the auditor's position, as appropriate, set off further as subsections. Comprehensively rebut nonconcurrences or reference any modifications made in the report based on the agency reply. Sequence this information in the following manner:

Recommendation (No.):
(Agency Name) Response:
OIG Position:

This structure should be used on a recommendation-by-recommendation basis. List all recommendations, followed by the agency reply and a single OIG position if the agency provides, for example, a single corrective action which will fulfill multiple recommendations.

The agency response subsection should clearly describe the pertinent actions and timeframes proposed by the agency in response to the recommendation. If the response is succinct as in, "Instruction 1924.16 will be revised by November 11, 1998, to eliminate all nonprogram loans," it should be reported verbatim. If the reply is excessively lengthy, or contains superfluous information, the agency response subsection should be paraphrased or summarized. Considerable care must be taken not to misstate or misinterpret the reply, however. The requirement of full disclosure will be met by attaching the agency's response intact to the audit report as an exhibit.

One of the most critical phases of the audit process is the determination to accept the agency's proposed management decision. For guidance in this area, refer to IG-7218, The Management Decision Process. If OIG agrees that the management decision is acceptable, the

(E6c)

OIG position subsection will be limited to a statement of agreement. If the agency has proposed an alternative action to the recommendation that is nonetheless acceptable, the OIG position subsection should recognize this in conjunction with OIG's statement of agreement.

Where the reply is deemed acceptable, requirements needed to achieve final action must be readily identifiable and understandable for the Office of the Chief Financial Officer (OCFO) in the agency response subsection. If they are not, further correspondence/interaction with OCFO would be necessary to clarify what the agency needs to do and by when. In addition, OCFO could make an erroneous final action determination due to a misunderstanding; if so, the benefits of the audit (i.e., corrective action) could be reduced or even lost.

If OIG does not agree with the management decision, or the decision is otherwise inadequate, we should specifically state our position, to include rebuttal and what the agency needs to do to gain OIG's acceptance, in the OIG position subsection.

The status of the resolution of the monetary results on exhibit A should be described as part of the OIG position subsection related to the recommendation (s) where the monetary results were coded into CAPTAIN.

Some guidelines for presenting recommendations follow:

(1) Relation to the audit findings. Recommendations should be directly related to the facts presented in the findings; they should propose an action specifically noted as nonexistent or lacking in the condition described. Each recommendation shall convey the proposed solution to the cause of the conditions presented in the findings. If the agency proposed an acceptable method of corrective action, the recommendation could be that the agency take that action.

(2) Compliance with regulations. A recommendation generally should not merely state that a certain regulation should be complied with, or restate the existing requirements, but should state what action is necessary to foster compliance with the regulation.

(3) Substantive recommendations. Recommendations shall be achievable, cost effective (unless compliance with legal requirements or health and safety concerns are at issue), and action-oriented (avoid terms like "remind," "emphasize," "encourage," "instruct," et. al.).

(4) Facilitation of final action. Recommendations should be formulated to

IG-7316

facilitate final actions. Recommendations should clearly set forth what needs to be done to ensure

(E6c)

agency understanding and to enable OCFO to determine if corrective action, once taken, fulfills the recommendation. For example, if the recommendation calls for the agency to "establish internal controls," the minimum requirements needed should be delineated. Recommendations should be restricted to a single respondent; the same recommendation to multiple parties makes the final action tracking process unduly complex and increases the likelihood of erroneous judgments as to whether final action has been achieved.

(5) Legal/Investigative matters. Recommendations calling for a referral to the Office of the General Counsel or the Comptroller General for opinions should also clearly state that the decisions should be implemented in a timely manner (specifying the number of days) upon receipt. Recommendations dealing with matters that have been referred and accepted for investigation need to be examined on a case-by-case basis. Audit needs to work with Investigations to determine what can be recommended. If no recommendation can be made, the matter must be withheld from the report and issued subsequent to the consummation of the criminal proceedings. If the recommendations for administrative actions can be made but the proviso included that the actions should not be undertaken until completion of the criminal proceedings, the legal action must be monitored by coordinating with Investigations; the agency should be alerted to initiate the actions when appropriate.

7. Reporting Recoveries. When recoveries are recommended, total dollars in the recommendation(s) must reconcile to the total dollars in exhibit A in the report.

8. General Comments. Include the following information where appropriate.

a. Recognition of noteworthy accomplishments, particularly when management improvements in one program or activity may be applicable elsewhere. Commendatory comments should normally deal with specific circumstances or conditions, not broad generalities.

b. The results of audit tests related to objectives which did not result in adverse conditions.

c. Observed conditions for which a recommendation is not appropriate, or timely, but which would be of interest to agency officials.

d. The nature of privileged or confidential matters. Specific information in this

IG-7316

regard should be omitted, but the audit report should state the nature of the information and the

(E8)

requirement that makes the omission necessary. If pertinent data is identified that is prohibited from written disclosure, it should be conveyed orally, as appropriate, to management.

e. Issues arising from an audit requiring further study. The likelihood of circumstances leading to a disclosure of this type is generally considered to be remote in that unsupported indications are not to be reported.

Each separate comment should be numbered and have a descriptive heading.

9. Exhibits. Reports containing monetary exceptions shall include, as exhibit A in the report, a summary of monetary results (example appears in exhibit H of this IGM). The summary data shall be compatible with the CAPTAIN definitions and reporting requirements. The agency's response to the official draft will be the last exhibit in the report.

10. Distribution Page. The last page of the audit report shall contain a list of officials and offices receiving a copy of the report. This distribution page is not an exhibit but is headed "Informational copies of this report have been distributed to...."

F. MEMORANDUM REPORT FORMAT

In unusual circumstances, a memorandum may be the most appropriate format to convey the audit results. All requirements for an audit report promulgated in this manual section must be met except that certain modifications can be made to the format, as described herein.

A memorandum report should not exceed four pages (and never five) in length. Memorandum reports may be used, for example, for reports with only one finding. Memorandum reporting should not be a goal to use at the beginning of an audit but rather a consideration at the end if the results were minimal. A brief summary statement should be made at the outset of the document describing the work performed and the major findings. The following subparagraphs should be used.

1. Background
2. Objectives
3. Scope and Methodology

4. Findings
5. Recommendations

G. NO ADVERSE CONDITIONS

Reports without adverse conditions should consist of the transmittal memo, executive summary, and introduction sections. A general comments section should be included if needed to more fully explain the work performed, observations, and conclusions.

H. INPUT TO FINANCIAL STATEMENT AUDITS

All reports with material internal control or compliance with laws and regulations findings should be sent to RIG, FADPO, and the RIG's responsible for specific financial statement audits, for consideration for inclusion in the annual financial statement audit.

I. NON-USDA AUDITS

Non-USDA audit reports, when issued by OIG, shall be validated by the signature of the appropriate OIG official on the transmittal letter that is bound OUTSIDE the cover of the report. Distribution of such reports shall be in accordance with IG-7217, Transmittal and Distribution of Audit Reports.

1. Single Audits. These audits will be obtained and issued in accordance with IG-7510, Single Audits of State and Local Governments.
2. Contracted Audits. All policies and procedures in this section apply to audit reports prepared under contract with OIG.

oOo

United State
Department of
Agriculture

Office of Inspector General
Inspector General

Washington, D.C.

MANAGEMENT ALERT

To: (Name) Date:
Chief Financial Officer
Office of the Chief Financial Officer

From: (Name)
Assistant Inspector General
for Audit

Audit Title:

Issue(s):

Recommendation(s):

EXAMPLE OF THE "MESSAGE DESIGN FORM FOR REPORTS"
(see page 2 for discussion)

Audit Title: Audit of the Rural Utilities Service's Graduation of Water and Waste Program Borrowers – Lack of Controls Rendered the Process Ineffective

Finding: Community Program's loan graduation process ineffective.

Criteria: The law and program regulations require that borrowers obtain credit from private sector sources when they are able to do so.

Cause: Internal controls are inadequate as prescribed.

Evidence: 1. Agency instructions require district directors to perform only a generalized canvassing of prospective lenders (e.g., "would you be interested in refinancing our loans?") and thus elicit responses of little or no utility (e.g., "it depends upon financial condition").

2. Agency instructions are vague and too limited regarding district office's reviews of its portfolio to identify graduation candidates (e.g., "consider present and potential income"). Lack of stated criteria results in graduation conclusions that are not meaningful (e.g., "can't graduate -- low on cash").

3. In FY 19XX, the agency graduated only two of its 19,000 borrowers although only 2.5% were in arrears on their debt repayments (indicating financial strength).

Impact: Interest subsidies (\$200 million in FY 19XX) could be reduced if borrowers able to obtain credit elsewhere were graduated, as required.

Conclusion: The agency has no assurance that graduation requirements are met.

Recommendation: A detailed financial analysis guide, to include financial ratios, should be developed in consultation with prospective lenders to identify likely graduation candidates. The financial data of the identified borrowers should be circulated to the lending community routinely. Borrowers fulfilling the criteria should be required to graduate or the loan should be called. Agency instructions should be revised to mandate use of the guide.

EXAMPLE OF "DISCUSSION DRAFT"
TRANSMITTAL MEMO

DATE:

REPLY TO

ATTN OF: 04099-297-At

SUBJECT: Farm Service Agency - Rural Housing Graduation
Pilot Project - Washington, D.C.

TO: (Name)
Administrator
Farm Service Agency

ATTN: (Name)
Director
Planning and Analysis Staff

Attached are three copies of the discussion draft report for the subject audit. We will contact you soon to arrange for an exit conference.

If you have any questions, please have your staff contact me at (telephone number).

(Name)
Director
Administration and Finance Division

Attachment

Exhibit D
of IG-7316

EXAMPLE OF "OFFICIAL DRAFT"
TRANSMITTAL MEMO

Number of
Copies needed
varies by
agency and is
described in
IG-7217.

Request response
be sent to
originating
region.

February 2000

DATE:

REPLY TO
ATTN OF: 08600-3-At

SUBJECT: Official Draft - Forest Service Analysis of
Knutson-Vandenberg Act Fund Balances

TO: (Name)
Chief
Forest Service

ATTN: (Name)
Deputy Chief for Administration

Attached are 10 copies of the official draft report for the subject audit. This audit was discussed with members of your staff on February 5, 1990. Based on comments at the exit conference, we made minor revisions to the report.

Please provide your written response to the official draft by March 16, (year), specifying corrective actions taken or planned on each audit recommendation and proposed completion dates for implementation of such actions. Your response should also provide concurrence or comments regarding the monetary amounts in exhibit A of the report. Your response along with our audit conclusions will be incorporated into the final report. Please address your response to:

(Name)
Regional Inspector General for Audit
Office of Inspector General
U.S. Department of Agriculture
(Address)

If you have any questions, please have a member of your staff contact (name) at (telephone number).

(Name)
Assistant Inspector General
for Audit

Attachment

Exhibit E
of IG-7316

EXAMPLE OF FINAL REPORT TRANSMITTAL MEMO

Memo is bound as
first page in final
report.

Submit the
original and
five copies to
the division.
Copies should
have appropriate
legends.

Note the word
"Attachment" is
no longer used.

February 2000

DATE:

REPLY TO

ATTN OF: 04099-299-At

SUBJECT: Rural Rental Housing Program - Lexington, Kentucky

TO: (Name)
Administrator
Farm Service Agency

ATTN: (Name)
Director
Planning and Analysis Staff

This report presents the results of our audit of the Farm Service Agency's management of construction activities related to the Rural Rental Housing Program in Kentucky. Your September 21, 1998, response to the draft report is included as exhibit E with excerpts and the Office of Inspector General's position incorporated into the relevant sections of the report.

We agree with your management decisions for recommendations No. 1a, 2, and 7. Management decisions have not yet been reached for recommendations No. 1b, 1c, 1d, 3, 4a, 4b 4c, 5, 6c, and 6b to include the monetary results reported in exhibit A of the report associated with recommendations Nos. 1c and 5. The findings and recommendations section of the report includes a description of the status of the management decision for each recommendation.

In accordance with Department Regulation 1720-1, please furnish a reply within 60 days describing the corrective action taken or planned and the timeframes for implementation for those recommendations for which a management decision has not yet been reached. Please note that the regulation requires a management decision to be reached on all findings and recommendations within a maximum of 6 months from report issuance, and final action to be taken within 1 year of each management decision. Correspondence concerning final actions should be addressed to the Office of the Chief Financial Officer.

(Name)
Assistant Inspector General
for Audit

February 2000

FINDINGS AND RECOMMENDATIONS

CHAPTER 1 - WATER AND WASTE PROGRAM'S LOAN GRADUATION PROCESS NEEDS TO BE REVAMPED TO REDUCE INTEREST SUBSIDIES
--

RUS's Water and Waste (W&W) loan graduation process, required by the CONACT and program regulations to reduce interest subsidies, has been ineffective. In FY 19XX, W&W graduated only two of its 19,000 borrowers to sources of private credit and thus did not materially reduce its \$200 million annual interest subsidy. This condition was caused by internal controls that were inadequate as prescribed by management to foster economy and efficiency and to fulfill legislative requirements. RUS's instructions, promulgated to guide its district offices to identify potential graduation candidates and to determine prospective interest from the lender community, were too general, limited, and/or vague to provide the requisite assurances.

DISTRICT OFFICE REVIEWS TO IDENTIFY GRADUATION CANDIDATES INADEQUATE

Our review disclosed that the process established to identify borrowers likely to graduate was flawed. Pursuant to RUS instructions, 1/ district offices were required to only "consider present and potential income" to determine which borrowers could sustain the higher interest rates associated with private credit. Further, no explanation was afforded regarding what the required consideration was to entail or how future income was to be

determined, nor was guidance provided as to how this authority was to translate into identifying potential graduation candidates. As a result, as noted, only two borrowers were graduated nationwide during FY 19XX.

1/ Cite criteria reference.

Financial Ratio Analysis Needed

Financial analysis entails, in part, the use of standardized ratios designed to provide insight into an entity's financial condition and to provide a quantitative comparative basis to examine one borrower against others. Although several ratios would need to be employed to identify graduation candidates, the following are examples to analyze the capability to incur higher interest expense:

- Times interest earned -- measures the ability to pay interest costs.
- Debt ratio -- depicts the percent of assets financed by creditors.
- Debt to equity -- measures leverage, or the entity's ability to profit from rates of return on assets which exceed the cost of liabilities.

The development and implementation of a financial guide employing financial ratios and standards for district offices when performing the graduation review would significantly improve the utility of the process and increase the likelihood of identifying potential candidates for obtaining credit elsewhere.

RECOMMENDATION NO. 1

Consult with the lender community to determine the financial ratios and indicators it uses to measure financial strength in its lending deliberations.

RUS Response

OIG Position

RECOMMENDATION NO. 2

Develop and implement via formalized instructions a financial guide for district offices' use in identifying graduation candidates.

RUS Response

OIG Position

RECOMMENDATION NO. 3

Provide training to district office personnel on the use of the financial guide and establish a monitoring process to ensure its effective utilization.

RUS Response

OIG Position

**LENDER CANVASSING
INEFFECTIVE**

Controls established to elicit lender interest were inadequate to generate meaningful information regarding the likelihood of refinancing. RUS instructions ^{1/} required only that lenders be "contacted;" no requirements were established governing how and what this process was to entail. The "contacts" we examined consisted generally of a form letter asking nearby banks if they had an interest in refinancing the RUS portfolio. Lender responses were generally limited to replies of no utility; for example, "it depends upon the borrower's financial condition."

Industry Specific Lenders Should be Identified

RUS borrowers largely consist of municipal operations' water and waste facilities. These represent unique industries and funding sources. RUS needs to determine the segment of the lender community which finances these types of borrowers to increase the potential for identifying lender interest.

End of example. Finding would continue.

^{1/} Cite criteria reference.

REPORTING REQUIREMENTS FOR AUDITS USING STATISTICAL SAMPLING PURPOSE

This exhibit provides guidance concerning information required in an audit report when statistical sampling is used.

POLICY

Drafts of audit reports with statistical estimators must be reviewed by an OIG statistician for correct presentation of the statistical results. The reporting requirements for all statistically sampled audits include the following.

- (1) The point estimate and the sampling precision of the most important variable or attribute in the report must be stated within the text of the applicable finding. In addition, the upper and/or lower 95% confidence levels should be given as appropriate.
- (2) A detailed summary of statistical projections and their sampling variability should be tabulated in an exhibit. The variability of all estimates used in the audit report will be shown in this exhibit by both the sampling precision and the upper and/or lower 95% confidence levels. For a one-sided level, only one value will be given, while for a two-sided, both values will be given.
- (3) Statistical estimators will be reported only for the defined and constructed universe.
- (4) Statistical estimates with negative lower 95% confidence limits will not be included in any audit report.
- (5) All statistical projections will use a 95% confidence limit. It may be a two-sided or one-sided lower confidence limit as determined by the ACP and an OIG statistician. Any deviations from this standard must be approved by the AIG/A before the final statistical projections are done.
- (6) The statistics used for a claim recommendation will have all the following characteristics. Any deviation must be approved, along with the basis for the deviation, by the AIG/A.
 - (a) Sample size of at least 30.

Exhibit G(2)
of IG-7316

- (b) Sample precision must be less than or equal to 25% at the 95% confidence level. The 25% sampling precision is determined as shown below in the sample precision definition.
 - (c) The 95% lower or upper confidence limit, not the point estimate, will be used to establish a claim recommendation in any OIG statistically sampled audit. The lower confidence limit is generally used for ineligibility and the upper confidence limit is generally used for eligibility.
- (7) Any statistics reported in an audit which are not used for a claim recommendation will have all the following characteristics. Any deviation must be approved, along with the basis of the deviation, by the AIG/A.
- (a) Sample size of at least 30.
 - (b) Non-negative 95% lower confidence level.
 - (c) Midpoint estimate used.

STATISTICAL EXHIBIT

The following information is required for every report where statistical sampling is included and should be reported in an exhibit. The summary, scope, and details sections should report only the results with appropriate references to the exhibit. Definitions are included in the attached listing of statistical terms.

Sample Design - The sample design will be described including the method of sample selection. This description should contain definitions of any stratification or staging that is employed.

Universe - The universe will be described in clear and concise terms and statistical inferences will be limited to this universe. For example, if the universe was defined as all households that have had duplicate issued (hand and machine) food stamp coupons in six Nebraska counties during March and April 1988, the inference can only be made about those six Nebraska counties for the duplicate issued food stamp coupons for the 2 months

covered.

Sample Unit - The audit report will describe the observed unit consistent with the definition of the universe. The sample unit may be a loan, a farm, household, site feeding day, carcass, etc.

Sample Size - The sample size must be included.

Variables and Attributes - Each variable or attribute included in the audit report will be defined. A description of the method used to determine the value of each variable or attribute must be stated. This may involve referencing the relevant law and/or regulation.

Point Estimate - The estimate of the total amount of the variable (or attribute) must be included. For example if the universe size is $N = 10,000$ and the mean value is $\bar{x} = 50$, then the point estimate of the variable (total) is $N \bar{x} = 500,000$.

Lower 95% Confidence Limit - Three 95% confidence limits can be calculated.

- (a) The lower 95% confidence limit (L95). This limit is defined as:

$$L95 = PTEST - t * STDERR,$$

where

PTEST = point estimate,
t = t factor (Student-t value) for a lower 95% confidence level and
STDERR = standard error of the point estimate.

We are 95% certain that the true universe value is greater than this limit.

- (b) The upper 95% confidence limit (U95). This is defined as:

$$U95 = PTEST + t * STDERR,$$

where

PTEST = point estimate,
t = t factor (Student-t value) for an upper 95% confidence level and
STDERR = standard error of the point estimate.

Exhibit G(4)
of IG-7316

We are 95% certain that the true universe value is less than this limit.

(c) The two-sided 95% confident limits (L95 and U95). These limits are

$$U95 = PTEST + t * STDERR,$$

$$L95 = PTEST - t * STDERR,$$

where

PTEST = point estimate,

t = t factor (Student-t value) for a two-sided 95% confidence level
and

STDERR = standard error of the point estimate.

We are 95% certain that the true universe value is between these limits.

Sampling Precision - The sampling precision of each statistical estimate used in the audit report must be included in the report. For estimating totals, averages, and counts, the sampling precision (sp) is defined to be:

$$sp = \frac{t * STDERR}{PTEST}$$

where

t = t factor (Student-t value) for a 95% confidence level

PTEST = point estimate of the total

STDERR = standard estimate of the point estimate

This percentage value is a measure of the sampling variability. It conveys the magnitude (expressed as a percentage) the point estimate is from the true value. In other words, the sampling precision is the point estimate minus the lower 95% confidence limit then divided by the point estimate and expressed as a percentage [i.e., $(\$100,000 - 80,000)/\$100,000 \times 100 = 20\%$]. For example, if we have this sampling precision of 20%, it could be reported

that we are 95% certain that our point estimate is within 20% of the true value. The size of

the sampling precision is dependent on the sample size and the variable or attribute being estimated.

For estimating percentages, the sampling precision (sp) is defined to be:

$$sp = t * STDERR,$$

where

$$t = t \text{ factor for a 95\% one-sided or two-sided confidence level as required and}$$

$$STDERR = \text{standard error of the point estimate (percentage value).}$$

Nonresponse - If selected sample units cannot be located, an OIG statistician must be contacted to determine the appropriate course of action to handle the missing sample units. There are many ways to handle these problems. For example, selected sample units that cannot be found (file not found, loan paid off, etc.) could be treated as if the sample size is one less for each missing sample unit. This makes the assumption that the average for the nonresponse sample unit is equal to the average of the sample units that could be evaluated.

In any event, it is important to keep these missing sample units in the sample for statistical analysis purposes. There are various assumptions and statistical methods that can be employed to help with this situation. When nonresponse is high, attribute statistics can be calculated and included in the report to show how many files were lost, or how many loans were paid off, etc.

DISCLOSURE ON SAMPLING VARIABILITY

Statistical estimates produced from a random sample will have wide ranges of sampling variability. The precision of these estimators determines the use and presentation of the statistics in each report. The following requirements pertain to all statistical qualities except percentages.

Precision less than or equal to 25% - As previously noted, if a claim is expected to be established based on a statistical projection, the sample size must be large enough to produce a point estimate that has a sampling precision of 25% or less. The appropriate lower or upper 95% confidence limit will be used. Statistical data with this level of precision are considered very reliable and can be used for reasons other than for a recommended claim.

February 2000

Exhibit G(6)
of IG-7316

Precision higher than 25% but less than 50% - Statistical estimators that have this much sample variability have identified the problems but the range of values that the universe statistic could have is fairly large. These statistics are valid and should be used but the auditee should be made aware of the variability of the data. The precision is partly a function of the size of the sample. However, cost and time constraints, program size, etc., may not warrant the extra resources to complete more samples to produce statistics with a lower level of precision.

Precision of 50% or greater - Statistical estimators with this much variability should be considered with respect to the significance of the value of the lower 95% confidence limit. In general, if the lower 95% confidence level is large and significant by audit standards then it is entirely statistically valid to present these results. However, point estimates with this much variability, especially in the 80%-99% range, have questionable reliability and should be considered carefully. An OIG Statistician should be consulted for these types of statistical estimates. These estimators must be presented with a full disclosure of the sampling precision.

STATISTICAL TERMS

Universe	A collection of all the sample units from which a sample is selected, denoted by N.
Universe Statistic	A number generated by evaluating all possible sample units for a specific parameter.
Sample	A group of sample units selected from a universe by a statistically valid random method, denoted by n.
Sample Unit	A unit on which some measurement is planned. The sample unit may be a farm, loan, borrower, etc.
Variable	A variable is the measured characteristic of the sample unit where it can be assumed that the possible number of values is large and those values are ordered. An example would be dollars.
Attribute	An attribute is a measured characteristic of the sample unit where it is assumed that the possible values are small, and not necessarily ordered. An example would be political party.
Mean	The average value from a sample, denoted by \bar{x} .
Point Estimate	An estimate of the total value. The point estimate is calculated by $N\bar{x}$.
Sample Precision	A percentage value expressing the measure of dispersion of a statistical estimator.
Sample Error	An absolute value expressing the measure of dispersion of a statistical estimator. The difference between the point estimate and the lower 95% confidence limit.
Confidence Limits	The values calculated from a sample whose range on either side of the point estimate will contain the true value of the parameter being estimated a stated percent of the time (i.e., 95%). This percent is known as the level of confidence.

February 2000

Exhibit H
of IG-7316

Finding
Number

Recommendation
Number

Description

(Indicate Appropriate
Category to Capture
Monetary Results)

END OF IG-7316

February 2000